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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,206	04/16/2004	Anna Burago		1154

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EXAMINER
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EHICHIOYA, FRED I

ART UNIT	PAPER NUMBER
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2162

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/826,206	<b>Applicant(s)</b> BURAGO ET AL.	
	<b>Examiner</b> Fred I. Ehichioya	<b>Art Unit</b> 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04/16/2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 - 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1 – 29 are pending in this Office Action.

### ***Specification Objections***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 22 and 29 are rejected under 35 U.S.C. 101 because:

- (i) These claims are directed to generating at least one suggested search criterion that improves searching in a database of documents. The claimed subject matter lacks a practical application of judicial exception (law of nature, abstract idea, naturally occurring article/phenomenon) since it fails to produce a useful, concrete and tangible result. Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails produce a result that is limited to having real world value rather that a result that may be interpreted to be abstract in nature as, for example, a thought, a computation, or manipulated data. More specifically, the claimed subject matter provides for "choosing a subset of said chosen potential search criteria such that a criterion outside the subset is met by a set of documents close to the set of

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documents met by at least one of the search criteria in the said subset” or “allow user to iterate the algorithm outlined here to refine the search results”. This produced result remains in the abstract and, thus, fails to achieve the required status of having real world value.

(ii) Claims 1, 22 and 29 are directed to program per se. When the computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program’s functionality to be realized (MPEP 2106.01 [R-5] (I)). Merely amending the claim(s) to supply an appropriate medium is insufficient under USPTO policy to provide a fully patent-eligible claim under 35 USC 101

The claimed invention does not accomplish a “practical application” as forth in MPEP 2106 (II) (A).

Claims 2 – 21 depend from independent claim 1 and claims 23 - 28 depend from independent claim 22; these claims inherit the deficiencies of the independent claims respectively. Therefore, claims 2 – 21 and 23 – 28 are rejected under 35 U.S.C. 101 for the reasons stated above.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claim 20, the phrase "***other information not directly related***" renders the claim indefinite because the use of this phrase is unclear as to what they represent and it is also unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 – 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Rubenczyk at al., "Rubenczyk" U.S. Pub. No. 2003/0217052.

Regarding claims 1, Rubenczyk discloses a method of generating at least one suggested search criterion that improves searching in a database of documents, said method comprising of:

analyzing the documents comprising the result of the first search to find at least one potential search criterion met by at least one of said documents (page 5, [0117]);

choosing at least one search criterion among said potential search criteria that is met by a number of said documents (page 15, [0434: "the user is initially only sent queries, and the refining process continues until the search engine 10 is satisfied that it has pared down the results to a useful number or until some other criterion for finalizing the results is satisfied"), where said number is greater than a certain lower threshold and less than a certain upper threshold (page 14, [0421]: "The numerical value can then be thresholded to decide whether to add the data item to a result space or not");

choosing a subset of said chosen potential search criteria such that a criterion outside the subset is met by a set of documents close to the set of documents met by at least one of the search criteria in the said subset (page 4, [0086] – [0091]).

Regarding claim 2, Rubenczyk discloses wherein said thresholds are set at some fixed percentages of the number of documents in the said first search result (page 14, [0421]).

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Regarding claim 3, Rubenczyk discloses wherein said thresholds are adjusted based on the analysis of the said first search result (page 25, [0595]: "Some items may be excluded from the ranking, based on a selected threshold of significant mismatch).

Regarding claim 4, Rubenczyk discloses wherein said database of documents is World Wide Web, or a subset thereof (page 13, [0413]).

Regarding claim 5, Rubenczyk discloses wherein types of said documents include but are not limited to hypertext documents, Web pages, text documents (page 14, [0428]).

Regarding claim 6, Rubenczyk discloses wherein said result of first search is a set all documents meeting the search criteria of said first search (page 15, [0434]).

Regarding 7, Rubenczyk discloses wherein said result of first search is a subset of all documents meeting the search criteria of said first search (page 10, [0320]).

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Regarding 8, Rubenczyk discloses where said choosing a subset is achieved by grouping said chosen search criteria into at least one group where said criteria within each said group are similar with respect to searching (page 5, [0116]).

Regarding claim 9, Rubenczyk discloses wherein said similarity is calculated as correlation of two functions that describe the appearance of said criteria in said documents (page 14, [0429]).

Regarding claim 10, Rubenczyk discloses selecting at least one search criterion within at least one group and assigning said selected search criterion as representative of this group (page 5, [0111]).

Regarding claim 11, Rubenczyk disclose wherein said selection is based in part on correlation of potential representative to other criteria within said group (page 14, [0429]).

Regarding claim 12, Rubenczyk discloses wherein said selection is based in part on Correlation of potential representative to criteria outside said group (page 6, [0140]).

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Regarding claim 13, Rubenczyk discloses wherein said selection is based in part on pattern of occurrences of said potential representative in said documents (page 21, [0513]).

Regarding claim 14, Rubenczyk discloses wherein said selection is based in part on ability of said potential representative to divide the search space (page 3, [0057]).

Regarding claim 15, Rubenczyk discloses wherein said selection is based in part on linguistic information (page 3, [0048]).

Regarding claim 16, Rubenczyk discloses wherein said selection is based in part on contextual information (page 23, [0546]).

Regarding claim 17, Rubenczyk discloses wherein said potential criteria comprise a phrase and a procedure of matching said phrase to phrases contained in said documents (page 28, [0644]).

Regarding claim 18, Rubenczyk discloses wherein said phrases comprise sequences of two or more words (page 24, [0557]).

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Regarding claim 19, Rubenczyk discloses wherein said procedure comprising matching each word in said phrase to a sequence of words in said documents (page 25, [0584]).

Regarding claim 20, Rubenczyk discloses wherein said procedure includes disregarding: auxiliary words; hypertext markup; scripts; and other information not directly related to the semantics of the document (page 23, [0543]).

Regarding claim 21, Rubenczyk discloses wherein said matching includes linguistically normalizing word forms (page 24, [0576]).

Regarding 22, Rubenczyk discloses an interactive method of searching a database of documents comprising the following steps:

- accepting the first search request from user (page 15, [0432: "initial request from user"]);

- executing the said search request (page 15, [0434]: "the resulting formal request is used to search the database");

- analyzing the result of said search request execution (page 10, [0308]);

- calculating at least one new search criterion based on said analysis (page 3, [0049]);

- allowing the user to select at least one said new criteria (page 15, [0434]: "the user is initially only sent queries, and the refining process continues until the

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search engine 10 is satisfied that it has pared down the results to a useful number or until some other criterion for finalizing the results is satisfied"); and iterating said algorithm to refine the search results, wherein each subsequent iteration involves new analysis of results obtained in the previous iteration (page 6, [0156]).

Regarding claim 23, Rubenczyk discloses wherein said database of documents is World Wide Web, or a subset thereof (page 13, [0413]).

Regarding claim 24, Rubenczyk discloses wherein types of said documents include but are not limited to hypertext documents, Web pages, text documents (page 14, [0413]).

Regarding claim 25, Rubenczyk discloses wherein user can choose at least one of the said selected new criteria to be added to said search request for subsequent iterations (page 21, [0515]).

Regarding claim 26, Rubenczyk discloses wherein user can choose a complement of at least one of the said selected new criteria to be added to said search request for subsequent iterations (page 21, [0515]), where complement of a criterion is defined as a new criterion that is met by a document if and only if the said document does not meet the original criterion (page 21, [0512]).

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Regarding claim 27, Rubenczyk discloses wherein at least one of search criteria in the said search request can be ignored (page 5, [0121]).

Regarding claim 28, Rubenczyk discloses wherein at least one search engine is used to execute the said search request (page 1, [0002]).

Regarding claim 29, Rubenczyk discloses a computer program product for use in a computer system, the computer program product for assisting the user in searching, the computer program product comprising one or more computer-readable media having stored thereon computer executable instructions that, when executed by a processor, cause the computer system to perform the following:

- accept the first search request from user (page 15, [0432]: "initial request from the user");

- execute the said search request (page 15, [0434]: "the resulting formal request is used to search the database");

- present the user with the result of said search request execution (page 15, [0434]: "the user is initially only sent queries, and the refining process continues until the search engine 10 is satisfied that it has pared down the results to a useful number or until some other criterion for finalizing the results is satisfied");

- analyze the result of said search request execution (page 10, [0308]);

- present user with suggested search criteria that are selected based on said analysis to optimize the next search iteration (page 5, [0117]);

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allow user to select at least one said new criteria and add it to the search request (page 21, [0515]);

allow user to select at least one said new criteria and add its complement to the search request (page 21, [0512]); and

allow user to iterate the algorithm outlined here to refine the search results (page 6, [0156]).

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**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred I. Ehichioya whose telephone number is 571-272-4034. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Fred I. Ehichioya  
Patent Examiner  
Art Unit 2162



December 26, 2006



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**SUPERVISORY PATENT EXAMINER**